PTO/SB/21 (08-03) Approved for use through 07/31/2006. OMB 0651-0031 U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE on Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. Application Number 10/729,726 Filing Date TRANSMITTAL December 5, 2003 First Named Inventor **FORM** Sung-Mo KANG Art Unit 2838 (to be used for all correspondence after initial filing) **Examiner Name** Not Yet Assigned Attorney Docket Number Total Number of Pages in This Submission 6 416272004201 ENCLOSURES (Check all that apply) After Allowance Communication Fee Transmittal Form Drawing(s) to Group Appeal Communication to Board of Fee Attached Licensing-related Papers Appeals and Interferences Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) Amendment/Reply Petition Petition to Convert to a After Final Proprietary Information Provisional Application Power of Attorney, Revocation Affidavits/declaration(s) Status Letter Change of Correspondence Address Other Enclosure(s) (please **Extension of Time Request** Terminal Disclaimer identify below): PTO Form 1449 (2 pgs.) **Express Abandonment Request** Request for Refund Return Postcard Information Disclosure Statement (3 CD, Number of CD(s) Certified Copy of Priority Document(s) Remarks Response to Missing Parts/ Incomplete Application Response to Missing Parts under 37 CFR 1.52 or 1.53 SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT Firm MORRISON & FOERSTER LLP Stephen C. Durant - 31,506 Individual name Customer No. 20872 Signature Date April 5, 2004

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an envelope addressed to:	Commissioner for Patents, P.O. Bo Signature: William	ox 1456, Alexandria, VA	22313-1450, on the date sho	own below.
	La rotta	4 (DAM - 5		
Dated: April 5, 2004	Signature: 10/000	- 0/0000	(Loretta Garcia)	



#### CERTIFICATE OF MAILING BY "FIRST CLASS MAIL"

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Loretta Garcia

#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the application of:

Sung-Mo KANG and Seung-Moon YOO

Serial No.: 10/729,726

Filing Date: December 5, 2003

For: LOW-POWER HIGH-PERFORMANCE

INTEGRATED CIRCUIT AND

**RELATED METHODS** 

Examiner: Not Yet Assigned

Group Art Unit: 2838

## INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. § 1.97 & 1.98

Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450

Dear Sir:

Pursuant to 37 C.F.R. § 1.97 and § 1.98, Applicants submit for consideration in the above-identified application the documents listed on the attached Form PTO-1449. Copies of the documents were previously submitted in an Information Disclosure Statement and/or Office Action, directed to the related application Serial Number 10/155,490, filed May 22, 2002, and, accordingly, copies are not included herewith. This protocol conforms with 37 C.F.R. § 1.98(d)

sf-1661625

and M.P.E.P. 609(A)(2). The Examiner is requested to make these documents of record in the application.

	This I	nformation Disclosure Statement is submitted:
	With t	he application; accordingly, no fee or separate requirements are required.
	Before	the mailing of a first Office Action after the filing of a Request for Continued
	Exami	nation under § 1.114. However, if applicable, a certification under 37 C.F.R. §
	1.97(e	)(1) has been provided.
$\boxtimes$	Within	three months of the application filing date or before mailing of a first Office
	Action	on the merits; accordingly, no fee or separate requirements are required.
	Howe	ver, if applicable, a certification under 37 C.F.R. § 1.97(e)(1) has been provided.
	After 1	receipt of a first Office Action on the merits but before mailing of a final Office
	Action	or Notice of Allowance.
		A fee is required. A check in the amount of is enclosed.
		A fee is required. Accordingly, a Fee Transmittal form (PTO/SB/17) is attached
		to this submission in duplicate.
		A Certification under 37 C.F.R. § 1.97(e) is provided above; accordingly; no fee
		is believed to be due.
	After 1	mailing of a final Office Action or Notice of Allowance, but before payment of the
	issue f	ee.
		A Certification under 37 C.F.R. § 1.97(e) is provided above and a check in the
		amount of is enclosed.
		A Certification under 37 C.F.R. § 1.97(e) is provided above and a Fee Transmittal
		form (PTO/SB/17 is attached to this submission in duplicate.)

Applicants would appreciate the Examiner initialing and returning the Form PTO-1449, indicating that the information has been considered and made of record herein.

The information contained in this Information Disclosure Statement under 37 C.F.R. § 1.97 and § 1.98 is not to be construed as a representation that: (i) a complete search

has been made; (ii) additional information material to the examination of this application does not exist; (iii) the information, protocols, results and the like reported by third parties are accurate or enabling; or (iv) the above information constitutes prior art to the subject invention.

In the unlikely event that the transmittal form is separated from this document and the Patent Office determines that an extension and/or other relief (such as payment of a fee under 37 C.F.R. §1.17(p)) is required, Applicants petition for any required relief including extensions of time and authorize the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing 416272004201. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

Dated:

April 5, 2004

Respectfully submitted,

By: \_

Stephen C. Durant Registration No. 31,506

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San Francisco, California 94105-2482

Telephone: (415) 268-6982 Facsimile: (415) 268-7522 APR 0 8 200K 37

Form PTO-1449

# INFORMATION DISCOSURE TATION IN AN APPLICATION

(Use several sheets if necessary)

Docket Number 416272004201	Application Number 10/729,726		
Applicant			
Sung-Mo KAN	G and Seung-Moon YOO		
Filing Date December 5, 2003	Group Art Unit 2838		

## U.S. PATENT DOCUMENTS

Mailing Date April 5, 2004

Examiner Initials	Ref. No.	Date	Document No.	Name	Class	Subclass	Filing Date If Appropriate
<del></del>	1.	5/19/1992	5,115,150	Ludwig, Mark A.			
	2.	9/29/1992	5,151,620	Lin, Ming-Zen			
	3.	12/29/1992	5,175,448	Fujii			
	4.	8/26/1997	5,661,419	Bhagwan			
	5.	3/9/1999	5,880,604	Kawahara et al.		·	
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	7.	8/22/2000	6,107,869	Horiguchi et al.			
	8.	2/20/2001	6,191,615	Koga, Hiroshi			
	9.	3/20/2001	6,204,696	Krishnamurthy et al.			
	10.	4/9/2002	6,370,052 B1	Hsu et al.			
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	12.	6/25/2002	6,411,157	Hsu et al.			
	13.	8/27/2002	6,442,086 B1	Dean			
	14.	12/2002	6,492,837 B1	Narendra et al.			
	15.	5/21/2002	10/153,158	Yoo et al.			

## FOREIGN PATENT DOCUMENTS

Examiner Initials	Ref. No.	Date	Document No.	Country	Class	Subclass	Transi YES	lation NO

## OTHER DOCUMENTS

(including author, title, Date, Pertinent Pages, Etc.)

Examiner Initials	Ref. No.	Title
X	16.	M. Anis et al., "Dynamic and Leakage Power Reduction in MTCMOS Circuits Using an Automated Efficient Gate Clustering Technique", IEEE, June 10-14, 2002, New Orleans, Louisiana, pp. 480-485.
*	17.	Assaderaghi et al., "A Dynamic Threshold Voltage MOSFET (DTMOS) for Ultra-Low

## **EXAMINER:**

DATE CONSIDERED:

EXAMINER: Initial if citation considered, whether or not the citation conforms with MPEP 609. Draw a line through the citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.

sf-1661650 PTO/SB/ 08 (2-92)

Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Form PTO-1449			Docket Number 416272004201	Application Number 10/729,726		
INFORMATION DISCLOSURE CITATION			Applicant			
IN AN APPLICATION			Sung-Mo KANG and Seung-Moon YOO			
(Use several sheets if necessary)			Filing Date December 5, 2003	Group Art Unit 2838		
			Mailing Date April 5, 2004			
X		Voltage Operation", <i>International</i> pages 809-812, June 1994.	Electron Devices Meeting, Di	gest of Technical Papers,		
Ý	18.	J. Burr and J. Scott, "A 200mV Self Power CMOS", ISSCC Digest of T				
χ̈́	19.	Mark N. Horenstein, Microelectronic C	Circuits & Devices, 1996, pgs. 2	40-250.		
*	20.	M. Horiguchi et al., "Switched-Sou Subthreshold Current Giga-Scale La 1135, November 1993.				
Χ	21.	T. Iwata et al., "Gate-Over-Driving Operated Devices", ISSCC Digest	CMOS Architecture for 0.5V of Technical Papers, pages 29	Single-Power-Supply- 90-291, February 1997.		
Χ.	22.	Kawaguchi et al., "A CMOS Schem Current", ISSCC Digest of Technical	ne for 0.5V Supply Voltage wal Papers, pages 192-193, Fet	rith Pico-Ampere Standby bruary 1998.		
4	23.	T. Kuroda et al., "A 0.9V 150MHz 10mW 4mm <sup>2</sup> 2D Discrete Cosine Transform Core Processor with Variable-Threshold-Voltage Scheme", ISSCC Digest of Technical Papers, pages 166-167, February 1996.				
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X	25.	K. Seta et al., "50% Active-Power Saving without Speed Degradation Using Standby Power Reduction (SPR) Circuit", in <i>ISSCC Digest of Technical Papers</i> , pages 318-319, February 1995.				
. Y	26.	S. Shigematsu et al., "A 1-V High-Speed MTCMOS Circuit Scheme for Power-Down Application Circuits", <i>IEEE Journal of Solid State Circuits</i> , 32(6):861-869, June 1997.				
X	27.	Seung-Moon Yoo et al., "New High Performance Sub-1V Circuit Technique with Reduced Standby Current and Robust Data Holding", IEEE International Symposium on Circuits and Systems, May 28-31, 2000, Geneva, Switzerland (Pages 1-4)				
Y	28.	Notice of Allowance and Fee due, Notice of Allowability and Examiner's Amendment for Application Ser. no. 10/153,158, 6 pgs.				
<b>y</b>	29.	Amendment A for the U. S. patent application 10/153,158, Yoo et al., filed 5/21/2002, 13 pgs. 4/9/2003.				
Х	30.	International Search Report mailed on February 25, 2004, for PCT/US03/24976 filed on August 8, 2003, 7 pgs.				
X	Diol	not receive				
EXAMI	NER:		DATE CONSIDERED:			
		al if citation considered, whether or not the citation considered. Include a copy of this form with n		ine through the citation if not in		